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ON THE TREATMENT OF VARICOSE VEINS.

BY H. H. SMITH, M. D.

THE numerous operations which have been attempted for the cure of varicose veins, from the time of Hippocrates up to the present day, have all had their supporters, and all been reported as more or less successful. No one period, however, has rested satisfied, but each succeeding age has given up the mode of its predecessors, in the hope of finding some other which might prevent the dangerous consequences of the phlebitis which followed their operations. Without intending, at present, to support any one plan of treatment, I here offer a few cases as illustrative of the opinions and practice of one who is certainly the most indefatigable of the French surgeons in the investigation of any thing connected with his profession. Although M. Velpeau's researches go back as far as 1830, yet he has not lost any of his interest on this subject, but is pursuing it, not in the belief that he can preserve the patient from a return of the disease, even when he succeeds in obliterating the enlarged vessels, but because "*la nécessité d'oblitérer les troncs veineux pour guérir les varices, étant bien établie, il fallait trouver le moyen le meilleur, le plus facile, et le moins dangereux, pour l'obtenir;*"* and in one point he has certainly gained his object, that of a method frequently successful,—that is, not resulting constantly in serious consequences, or in the death of the patient, as out of more than a hundred cases operated on he met with no very dangerous symptoms, except a limited external phlebitis, phlegmonous inflammation, or small superficial abscesses.

The method was as follows:—The patient standing upright so as to distend the veins of his extremity, he seizes the largest of them, in a fold of the skin, and, elevating it, passes a strong common sized pin through the base of the fold, so as to allow the vein to rest with its posterior surface on the pin; then passing a strong waxed thread around the pin, (at first in the figure of 8, but latterly circularly,) he strangulates the tissues under the thread, pursuing the same course with the other principal varices, one above the other, to the number of three or four. Towards the sixth day after the operation the integuments slough and come away, leaving a small, superficial ulcer, generally easily healed.

Though obtaining considerable success, he at last was induced to change it, from the results of it on a man who entered the hospital of La Charité, aged thirty-four years, and in the enjoyment of perfect health, and on whom he operated the 4th of April, 1839. Every thing went well till

the night of April 15th, when he was attacked with chills, vomiting, nausea, inflammation of the limb, &c.; and, on the 19th, fifteen days after the operation, died with all the symptoms of absorption of pus. At the autopsy the lungs were found healthy, but engorged,—the heart natural, but containing a fibriform clot,—the stomach filled with a greenish fluid, and the intestine contained a plaque, inflamed, and commencing to ulcerate. The left vena saphena, which had been operated on, contained grumous and fluid blood,—but the obliteration was not complete, even in the parts where the ligature had been applied. The right vena saphena was larger than common, and, as well as the vena cava, was filled with blood in a very fluid state. After this case he modified his operation; and, in September, 1839, tried it on the subjoined cases:

SALLE ST. FERDINAND.

Case 1st.—No. 6. Robin, aged thirty years, an ironmonger, entered the ward Sept. 6th, 1839, suffering from moderate varices of the right leg, which he has had for six years. Eighteen months since he received a slight blow on the front of the tibia of this leg, which produced an ulcer which has since remained open. It is now the size of a five franc piece, deep, and with indurated, shelving edges. These were touched once with nitrate of silver, poulticed for four days, and afterwards dressed by strips of adhesive plaster, very firmly applied over it, and removed only every three days.

Sept. 12th.—M. Velpeau operated in the following manner:—The patient being upright, he seized the vena saphena in a fold of the skin above the varices, about three inches below the knee, on the internal part of the calf of the leg, and with a *tenotome*, or sharp pointed, narrow lancet, made a small opening through the base of the fold, behind the vein, through which he passed an eyed probe, armed with a ligature. Withdrawing the probe on the outer side of the fold, he allowed the vein to drop and lie upon the ligature,—then introducing the probe by the same external opening, he passed it in front of the vein, between it and the integuments, bringing it out where it had entered on the inner side of the fold. He next passed a common pin behind the vein, in the course of the ligature, bringing its point through the loop formed on the outer side, where the ligature had been turned to pass in front of the vein,—then tightening the thread, he tied the ends around the head of the pin, so as to compress the vein upon the pin under the skin, by which he hoped to prevent one cause of danger, viz., the inflammation resulting from compression of the integuments, and completed the operation by cutting off the pin's point. One other ligature was placed

* Leçons Orales.

in like manner about three inches below the first, and just below the varix, so as to cut off all communication between the lower and upper part of the leg through the enlarged vessels. Considerable inflammation followed around the ligatures, but did not extend above the upper one, though the glands of the groin became a little enlarged. No dressing was applied, but the patient was confined to bed.

Sept. 18th.—The ligatures came away to-day; there is a slight ulceration immediately around the opening made for the introduction of the probe, and a few drops of pus followed the removal of the pins; poulticed.

Sept. 21st.—The inflammation has rapidly disappeared; the ulcer below has improved wonderfully; the shelving edges are gone; it has filled evenly from the bottom, and partially cicatrized; bandelettes continued to it; no application to the other parts.

Sept. 26th.—The veins are entirely obliterated, feeling hard and round like a nerve, and the circulation through them is obstructed; the cicatrization of the ulcer is very firm, and scarcely distinguishable from the surrounding parts; bandelettes continued, with the use of a bandage from the foot to the knee.

Oct. 8th.—The ulcer has healed; the patient has been walking about some days,—but there is no return of the circulation through the veins, which seem perfectly fibrous.

Oct. 10th.—Discharged cured twenty-eight days after the operation.

SALLE ST. AUGUSTIN.

Case 2d.—No. 43. Sermaise, aged sixty-two years, a sailor, has had extensive varicose veins for the last twenty-five years, and numerous ulcers on the leg for the same period, the first of which was produced by a burn.

Sept. 9th.—At present there is a deeply excavated, indolent ulcer, of near three inches square, and the leg presents the appearance common to all old ulcers. The veins are very much enlarged, and varicose from near the ankle to the middle of the thigh; he has also a hydrocele of the same side, and an inguinal hernia on the other, (right.) The ulcer was poulticed for two days, and afterwards dressed with strips of adhesive plaster, as in the other case.

Sept. 15th.—M. Velpeau placed two ligatures around the vena saphena on the thigh, about three inches apart, and the upper one about five inches from the groin, in the same manner as in the preceding operation. No dressing.

Sept. 18th.—Much inflammation has followed the operation, but it is confined to the vicinity of the ligatures; the vein between these points is tumid, and painful on the least pressure. He has slight fever, some little pain in the groin, but none in the abdomen. Poultice to the parts.

Sept. 21st.—The inflammation is subsiding, but the ligatures are yet firmly adherent. M. Velpeau to-day operated on the hydrocele with pure tincture of iodine.

Sept. 24th.—The last ligature came away to-

day,—the other yesterday; there is a slight discharge of pus from the points of ligature, and the cutis has come off the inflamed portion, as in a blister, leaving the surface reddened and thick by the deposition of lymph in the subcutaneous cellular substance. Considerable inflammation has followed the operation on the hydrocele, but not more than is usual where the pure tincture is used of full strength. The patient is a little restless from this, with slight fever. The ulcer is much improved under the straps.

October 3d.—The inflammation over the vein has entirely subsided—the vein is obliterated, firm and hard down to near the knee; the parts around are yet thick and indurated.

October 25th.—The ulcer is nearly healed, with a firm cicatrix—bandelettes continued and a bandage to leg—patient walking about the ward, and the veins are yet firm and apparently impermeable.

Nov. 1st.—Discharged—well.

Case 3d.—No. 42.—Froncher, aged 27, hairdresser, entered September 30th, with enlargement of the veins of the left testis, which has existed nearly eighteen months. The veins are moderately enlarged, and he has the usual symptoms of the disease.

October 2d.—M. Velpeau placed two ligatures around the largest of the veins, about two inches and a half from each other, and the highest about two inches from the inguinal ring. Ordered to remain in bed.

October 4th.—Very slight inflammation about the ligatures—slight pain in the veins between them—no pain along the cord or in the abdomen. No treatment.

October 8th.—More inflammation around the ligatures, but little at other points—ligatures are yet both firm.

October 13th.—One ligature came away to-day, with a slight discharge of pus from the opening; the other is still firm—inflammation disappearing, and the veins are thick and evidently contain a coagula—patient allowed to walk about with a suspensoir.

October 17th.—The second ligature fell to-day: the inflammation is trifling, but there is still a small ulcerated point around the last ligature—the veins are much firmer and more fibrous to the touch, and the patient leaves the ward to-day.

SALLE ST. FERDINAND.

Case 4th.—No. 14.—Denard, aged 33 years, a baker, of fine frame and robust health, has had varices of the right leg for the last ten years: there is and has been no ulcer. The veins are much enlarged, and tortuous, from the ankle to the knee—there are also two large plaques external to the course of the vena saphena, the largest of which is near two and a half inches in diameter, and situated on the middle and front of the calf—he is accustomed to stand the greater part of each night at his trade, and to press against his trough, a large portion of the time. Entered September 28th.

Sept. 30th.—M. Velpeau placed four ligatures around the veins, in the manner before mention-

ed—one on the saphena near the knee, above all the varices, one below them, near the lower third of the leg, and one above and below the large plaque, near the middle of the limb. No dressing.

October 3d.—Considerable inflammation and swelling around the ligatures, with much pain on touching the veins between them—no pain or inflammation above, nor is there pain in the groin. No treatment.

October 5th.—The inflammation has not spread upwards, but it has increased around the ligatures, which are yet firm: there is much heat and swelling at these points, and he cannot bear the slightest touch—ordered compresses wet in a decoction of quimanve (marsh mallows).

October 8th.—The lower ligature and the one at the lower part of the plaque came off to-day—pus followed their removal, and there is an ulcer, the size of a sixpence, at the point of the plaque: the parts are still inflamed, though rather less than at the last date: the veins are tumid, and, as well as the neighboring parts, tender to the touch. Poulticed.

October 9th.—At two o'clock last night he was attacked with rigors—slept none—has some cephalalgia—skin hot and dry—pulse 96—tongue furred—slight thirst—bowels not opened for two days—no inflammation above the knee is apparent, but the course of the vein and the groin is painful. Ordered *V. S. ad f. 3xvi.*—poultice to parts, low diet, and eau de sedlitz.

October 11th.—The inflammation has increased around the points of the ligatures; the last two came away yesterday; there is well marked erysipelas in the leg, and also half way up the thigh; pulse 98, quick and irritated; skin hot and dry; cephalalgia; restless; sleeps little; tongue thickly furred but moist; anorexia; bowels opened yesterday; lymphatic glands enlarged; ordered a large poultice to the limb with mercurial frictions to the thigh.

October 13th.—Has much pain in the groin as well as in the lower part of the abdomen, and in the lower right side of the chest; coughs frequently, and expectorates thick frothy mucous; chest rather flat posteriorly on right side; slight bronchial respiration and crepitant rale; other symptoms augmented; ordered fifteen leeches to groin; lotion of *ferri sulphas* to thigh and poultice to leg; no other treatment.

October 14th.—Pulse 100, quick and feeble; skin hot; cough more troublesome; well marked pleuropneumonia of right side; expression languid; prostrated; at ten o'clock last night was attacked with violent pain in the right hypochondriac region; respiration quick and painful; thigh much inflamed and swelled; groin less painful; ordered fifteen leeches under the right mammary region; blister to thigh; poultice continued; ant. tart. gr. ss. in 3iv. of syrup of gum.

October 15th.—Pulse 152, feeble and irregular; respiration quick and painful, 40 in the minute; cough very painful; sputa tenacious and brownish; less pain in chest since the leeches; prostration complete and evidently sinking; treatment continued.

October 16th.—Died at nine o'clock last night, seventeen days after the operation.

AUTOPSY.

October 17th—9 A. M.—Thirty-six hours after death.—No decomposition; general appearance natural; rigidity considerable; no œdema of extremities; chest flat on percussion on the right side; resonant on the left; slight cadaveric lividity of the back; blister on thigh and veins of right leg present the same appearance as during life; the skin on the right leg, being carefully dissected, showed the veins very much enlarged and varicose from just below the knee to the ankle, on the inner and front half of the leg. The vena saphena is very tortuous, frequently doubled on itself, and connected with a large plaque of veins on the front and inner part of the leg, anterior to its main trunk, and formed out of the enlargement of one of the superficial branches; a second and smaller plaque existed a little lower on the limb. At the upper and lower portion of the large plaque were two points of ulceration of the size of a shilling, with the destruction of a portion of the vein, corresponding to the points of the ligature. On the lower part of the saphena itself was a similar ulceration, and about the point of the upper ligature, near the knee, there was slight ulceration, with suppuration of the surrounding cellular substance. The lower point showed a destruction of near an eighth of an inch of the trunk of the vein, the extremity of which was at first thought to be obliterated; but subsequent maceration for twenty-four hours showed a small cavity in its centre, large enough to admit a needle. The upper portion of the vein, or the extremity above the upper ligature, admitted a fine probe, though it was very much thickened and diminished in calibre. The whole of the plaque was filled with pure straw-colored pus, and the vena saphena and a transverse superficial branch on the middle of the thigh contained more or less of the same. The whole course of the vein was marked by thickening of the cellular substance, and its coats were also much altered. The blood in the upper extremity of the saphena and the femoral was black and very fluid, and in the femoral, immediately at the entrance of the saphena, was a large clot, firmly adherent to its coats. The iliacs and the venæ cavæ were not altered, but contained the same dark fluid blood in a considerable quantity. The bowels and stomach were healthy, and the liver and kidneys were natural, and contained no abscesses; the spleen was more engorged than usual, but presented no other change.

Chest.—The right lung was inflamed, gorged with blood, and presented the appearance of the second stage of pneumonia: two large abscesses filled with pus were found in its middle lobe, near the surface. The pleura costalis and pulmonalis of this side was covered with lymph, and there was an effusion of near 3viii. of serum, mixed with pus, in the pleural cavity. The left lung and pleura were healthy. The heart was natural, but the right auricle and ventricle con-

tained a quantity of semi-coagulated blood; the left ventricle contained a large fibriform clot, adherent to the columnæ carneæ. *Brain*, healthy, but a little darker than usual.

Case 5th.—No. 20. Pachaud, aged 42, a cooper, has had enlargement of the veins of the left testis for fifteen years. They are much augmented and tortuous, forming folds, visible some feet from his person: the veins of the left leg are also varicose from the lower part to near the groin, forming great knots. Entered October 18th, 1839.

October 10th.—M. Velpeau placed a ligature after the same method, around the veins above the greatest enlargement, and about one inch from the external ring. He also placed a second at the lower part of the scrotum, below the great mass of the varix; the tying of the ligatures caused considerable pain: this has not been the case to the same extent in the other patients; no treatment except to remain in bed.

13th.—Slight pain in testicle and along the cord; some fever; tongue slightly furred; bowels not opened for two days; little thirst; good appetite; ordered bleeding three palets: low diet and a suspensoir.

14th.—Has rested badly; slight cephalalgia and is irritable; skin hot, pulse 90, but regular; bowels opened by enema; cord inflamed, tumid and painful; left iliac and pubic regions also painful on pressure; scrotum inflamed, especially around the pins; ordered thirty leeches to cord and groin.

15th.—Slept little; less pain in groin; scrotum tumid from effusion into the cellular substance, so as to almost conceal the pins; cord less painful, but much enlarged; only ten leeches took, and did not bleed freely; erysipelas in scrotum; ordered thirty leeches again to same parts; poultice and diaphoretic mixture.

16th.—Leeches took well; less pain in parts; slight discharge from ligatures which were cut out to-day by M. Velpeau; other symptoms a little improved; ordered decoction of quinauve to parts, and a suspensoir.

18th.—Free discharge from ulceration of ligatures of a thin greenish pus, with a small portion of sloughing cellular substance; a small abscess has formed in the lower part of the scrotum, which was opened and gave exit to a sanious matter; slight cough with mucous rale; simple bronchitis; little fever, but is again restless; ordered laudanum, gtt. xxx. in ʒj. syrup of gum; half a dose morning and evening; poultice to parts.

22d.—General augmentation of symptoms since last day, except in cough, which is better: pulse 95, small and tense; skin hot and dry; thirst; anorexia; furred tongue; headach; no pain in epigastrium on pressure; scrotum more inflamed and enlarged; epididymis hard and painful; erysipelas has attacked the penis and cord; free discharge of sanious matter from points of ligature which show no disposition to heal; last night he had a heavy sweat, but says he had no chill; ordered mercurial frictions to parts, and a purgative enema; poultice continued.

25th.—Erysipelas disappearing; scrotum and

parts less inflamed—but still very tumid; less fever; bowels been opened freely; stools liquid and yellow; more cheerful; slight desire for food; treatment to parts continued.

October 29th.—The inflammation has disappeared, but the scrotum is yet twice the ordinary size and quite dense; little discharge from ulcers; veins thick and hard; penis and groin nearly natural; cord a little thickened; general symptoms good.

November 2d.—Left the ward to go to his family on account of some domestic troubles. The ulcerated points are not yet healed; the scrotum is smaller but still quite dense, and he has now no pain in the parts. The veins feel firm and are without doubt obliterated.

The result of this last case was much happier than was anticipated at one period from the symptoms; but the consequences in No. 14, also those of the case of a young Englishman resident in Paris, who died of a phlebitis resulting from Mons. Breschet's operation for varicocele, have caused many to regard these operations as far from safe or promising useful results. A late number of a British periodical also reports the death of a man in the hands of Mr. Cooper; three or four days after he operated on him by Mons. Velpeau's original method of the pins and figure of 8 ligature, external to the integuments. The autopsy of No. 14, and the opportunity of examining several cases of phlebitis and of the varices in patients dead of other diseases, have fully confirmed the pathology of the affection and the little benefit likely to result from any operation. In three cases of varices in the lower extremity, not only was the vena saphena enlarged, but the other vessels anastomosed, and were augmented so as to render the obstruction of the circulation almost impossible. But in order to produce this obliteration, be it by caustic externally; by incisions, or by ligatures, what change must take place in the vessel? The first is the determining of that degree of inflammation, which Cruvelhier has denominated *phlebite adhesive*, and which results in the effusion on the inner coat of a plastic matter which adheres strongly to its sides and obstructs the circulation, as it encroaches on the cavity of the vessel. By this obstruction, the blood moves more slowly; its thicker particles are deposited and attach themselves to this false membrane, until, by a gradual deposition, a very small canal is left in the centre, as found in the case of No. 14. If the inflammation stops here, a gradual contraction of the clot follows; its more fluid portion, and the colouring matter, are absorbed, and the vein becomes firmly closed, and like a fibrous cord, as shown in what was once the veins of the fœtus, but which by this change become a fibrous cord in the falciform ligament of the liver. But should the inflammation continue, the clot itself will become inflamed, pus will be deposited, not always in the centre, but often in its very substance. This, under favourable circumstances, may be absorbed and terminate in resolution, but if, as frequently happens, the inflammation proceeds, the proportion of the

clot diminishes, that of the pus increases, the vein becomes filled with it, and its entrance into the circulation would be rapid, were it not that whilst the pus is forming, the inflammation has travelled up the vein, and gives rise to a second clot above, as shown in the clot found at the entrance of the saphena into the femoral in the above case. But this clot, when formed, was obliged to support the force of two powers, that acting on it from the saphena itself and that in the passage of the blood in the femoral, and in this way the pus having once reached the circulation in the large vessels, its distribution throughout the system must be so rapid as not to allow of the formation of a third clot. Even here, the formation of a clot is possible, as was shown in a case of metro-peritonitis, in which the iliacs and the lower part of the vena cava contained large clots, surrounded by a kind of membrane, and containing in their centre, a cavity large enough to admit a good sized probe. Supposing, therefore, a ligature applied to, or above a vein, beside the risks of the phlebitis, we should have to guard against inflammation of the subcutaneous cellular substance, and phlegmonous erysipelas, and after all, probably, have a recurrence of the disease from the increased circulation in the anastomosing branches, should we be so fortunate as to produce nothing more than an obliteration of the main trunk.

Paris, November 23, 1839.

AN ACCOUNT OF AN EPIDEMIC OF SCARLATINA, in *Butler and Armstrong counties, Pa.*

BY D. M. BORLAND, M. D.

To the Editors of the Medical Examiner.

GENTLEMEN,—The perusal of several articles in your valuable journal on the subject of scarlatina, induces me to offer you the result of my experience in an epidemic of this disease, which has prevailed during the past summer in the southwestern part of Armstrong county, and in the southeastern part of Butler county, of this state.

Its first appearance was in the village of Freeport, where it presented an unusually malignant character. Of the malignant cases which were ushered in by vomiting and purging, two terminated fatally; one in twenty-two, and the other in fourteen hours after the first manifestation of the disease. In these cases there were great restlessness and prostration of strength, coma commencing a few hours after the attack, from which the system never reacted; very small and frequent pulse; the extremities became cold; the eyes turned up under the lids; the countenance sank; the lips became purple; the pupils dilated, and very sensible to light; with every manifestation of cerebral congestion.

One of these cases, which occurred in a child four months old, was protracted to the seventh day. There was extensive ulceration of the tonsils, extending to the posterior nares, giving rise to an acrid discharge, which excoriated the parts it came in contact with. The reaction was im-

perfect; the eruption appeared imperfectly on the fourth day, but soon disappeared; collapse now supervened; the heat of the surface began to sink; the pulse became very frequent and feeble; the tongue dark brown; sordes on the teeth; the animal powers entirely prostrated; to which succeeded convulsive twitchings of the extremities, and death.

The details of another fatal case will exhibit the different modifications of the disease, as it occurred in this epidemic.

A child, two years old, was attacked with the ordinary premonitory symptoms, followed by pain in the head; nausea and vomiting; pains in the loins and extremities, with general muscular prostration; an eruption, of a livid hue, made its appearance on the fourth day; the pulse, though in the commencement active, has now become small and feeble; delirium appeared with the eruption, and in a short time terminated in coma; the cheeks suffused with a livid flush; the eyes dull; dark-coloured sloughs appeared on the tonsils; the nose discharged an acrid fluid; the extremities became cold, and death closed the scene.

This epidemic commenced its ravages in the latter part of May, and continued until the 1st of December, under every variety, from the most mild to the most malignant form. No class or age appeared to be exempt from it; it attacked alike the child and the adult. I have prescribed for it in an infant of three weeks old; even persons who had formerly been the subjects of the disease suffered very much from sore throat.

Treatment.—In the congestive cases, my object was to equalize the circulation, and to arrest the violent vomiting and purging; for this purpose, mustard was applied to the stomach and extremities, together with rubifacients, composed of tinct. capsic. and aqua ammonia. As soon as reaction was established, I commenced with small doses of calomel, repeated every two hours until it operated on the bowels. Subsequently I gave cold-pressed castor oil, to keep up a regular but moderate evacuation of the bowels throughout the disease. As a gargle, I used pyroligneous acid and water, and chloride of soda and water, in the proportion of twelve parts of water to one of the other ingredients. With a view of lessening the swelling and soreness of the tonsils, I made use of equal parts of vinegar and turpentine, to be rubbed on until it produced an eruption, which it generally did in the course of a few hours, and with the happiest effect. After reaction was established, the skin became hot and dry, and the patient restless, I used, with the most gratifying results, cold vinegar and water, with which I ordered the patient to be sponged every half hour. This remedy appeared to act so promptly in soothing the patient, that frequently a calm and refreshing sleep was induced ere the sponging operation was completed, out of which the little sufferer awoke with all the symptoms mitigated. To aid the refrigerant effects of sponging, the patient was lightly covered, and cool air freely admitted into the chamber. During con-

valescence, which was generally rapid, I enjoined a light, but nourishing diet, and to guard carefully against the influence of cold and variable weather. The former part of the above treatment is adapted only to those cases in which there was a want of reaction. Such is the plan of treatment which I found most available in the present epidemic. In the commencement of the epidemic I resorted to emetics of ipecac., but they proved so unavailing that I subsequently abandoned them entirely. Indeed, sponging was the sheet-anchor of my hopes. As regards the dropsical affection which frequently supervenes, I have nothing to say, as it did not occur in a single case.

Freeport, Armstrong county, Pa., Dec., 1839.

CASE OF DIFFICULT LABOUR.

BY ORLANDO FAIRFAX, M.D.

To the Editors of the Medical Examiner.

Gentlemen,—I send you the following case, thinking that at least one of its features, the occurrence of respiration twenty-four hours before birth, may make it interesting to the readers of the Medical Examiner.

Very respectfully, yours,

O. FAIRFAX.

On December 13th, at 11 o'clock, P.M., I was called to Mrs. M., in labour with her second child. She had been having regular pains for about three hours, and the membranes had just broken. I found the mouth and nose presenting in the os uteri, which was rigid, and dilated to an extent not greater than the size of a half dollar, the face being situated transversely in regard to the pelvis, and so high up that I could not reach it without introducing more than one finger. At 1 o'clock, A.M., in the absence of pain, having my hand in the vagina, with the points of my fingers on different parts of the face around the circumference of the os uteri, which was now dilated to twice the size of a dollar, I was surprised by hearing distinctly a sob, and then the sound of pretty regular respiration; and, shifting a finger to the mouth, I could plainly perceive a motion of the lips, synchronous with each respiratory sound. The air must have been admitted through the sulcus formed in the palm of my hand, by the approximation of the thumb to the little finger. At this time the head was engaged in the superior strait, the face being about midway in the pelvis. I did not attempt to reproduce the phenomenon, from fear of impairing the foetal circulation. The labour progressed but slowly through the day, the os uteri being still rigid in the early part of the afternoon, though the pains had continued to be strong, and the patient had been freely bled from the arm. At 8 o'clock, P.M., the head having for several hours ceased to descend, and finding the os uteri well relaxed, and the chin inclining toward the sacrum, I introduced my hand, raised the head slightly, and rotated the chin to the pubis; the next pain caused the head to descend, bringing the base of the lower jaw into the arch of the

pubis, but inclined somewhat to the right descending ramus, and the point of the chin, the mouth and nose to a situation just within the vulva. I then thought all would be well, but how great was my disappointment, when, after the next pain, I found that the chin had turned to the right sacro-ischiatic ligament, from which I had but just removed it. I repeated my manœuvre, and held the chin during four or five strong pains, without even the slightest advance occurring; in every pain the chin constantly and strongly tending to return to its former unfavourable position. I then, with the advice of my friend, Dr. F. S. Murphy, whom I had called in, determined to use the forceps. I accordingly drew off the water from the bladder, and attempted to introduce the instruments; but was foiled by the almost incessant contraction of the womb, and bearing-down efforts of the woman, excited by the introduction of the first blade. We then determined to administer to her a hundred drops of laudanum, and to leave her undisturbed for an hour. At the expiration of which time I bled her largely, brought the chin again to the pubis, introduced the instruments with comparative ease and extracted the head. The delivery of the head was accomplished at one o'clock, A.M. of the 15th. inst., twenty-four hours after my having observed the respiration. The child weighed eight pounds and a half, the head being relatively large. The mother and child are doing well.

Alexandria, (D. C.) December 17th, 1839.

THE MEDICAL EXAMINER.

PHILADELPHIA, DECEMBER 28, 1839.

WORKS RECEIVED.

DR. GROSS'S PATHOLOGICAL ANATOMY.—We have received a copy of this excellent work, and shall review it in one of the earlier numbers of the ensuing year. From the examination which we have given to the work, we can recommend it to the profession, as the most complete treatise on pathological anatomy within their reach. It possesses, indeed, some advantages not to be met with in other works on the subject.

INTRODUCTORY LECTURES, by Professors Hun, of Albany; Mitchell, of Transylvania; and Pancoast, of Philadelphia—Suitable, well written addresses, and entirely adapted to the purposes of introductory lectures.

THE NURSE'S GUIDE, "a series of instructions to females who wish to engage in the important business of nursing mother and child in the lying-in chamber." By J. WARRINGTON, M.D., Lecturer on Practical Obstetrics. Philadelphia: Thomas, Cowperthwait & Co. 1839.

Dr. Warrington is engaged in the practice and

practical teaching of Obstetrics, and is therefore conversant with the defective knowledge of many of the women who undertake the responsible office of nurse to lying-in women. His instructions are practical, and written in the plain, intelligible style which is adapted for the purposes of the work.

DOCUMENTS ON THE YELLOW FEVER.—We have received several valuable memoirs on this subject. 1st, a manuscript memoir from Dr. Rufz, of Martinique, for the Medical Examiner; this is an elaborate and very complete history of the disease as it appeared in that island. It will be published either entire, or in the form of copious extracts, in the early numbers of the Examiner.

We have also received two printed documents, one from the physicians of Augusta, and another from Dr. Ashbel Smith of Texas, detailing the symptoms and peculiarities of the disease as it occurred in these situations. An abstract of their contents will appear as soon as practicable.

CLINICAL LECTURE.

PHILADELPHIA HOSPITAL.

Wednesday, December 18, 1839.

LECTURE ON PHTHISIS PULMONALIS—MENINGITIS—PARALYSIS—INFLAMMATION OF THE HEART AND ITS MEMBRANES—AUTOPSY OF PHTHISIS COMPLICATED WITH PLEURISY, PERICARDITIS, AND ENDOCARDITIS.

By W. W. GERHARD, M. D.

No. 6—Winter Course.

I WILL to-day conclude the subject of phthisis for the present, by showing you one or two cases of the disease, and saying a few words in relation to its treatment. I shall occupy the remainder of the hour with some cases of cerebral and cardiac disease, and the results of the post mortem examination of an individual who recently died of phthisis complicated with serous inflammations of the heart and lungs.

I will first present to you a case of phthisis, commencing in a different mode from any of which I have yet spoken. The patient was attacked about two years since with *coxalgia*, of which he has never entirely recovered. The treatment consisted in the use of blisters and a seton: the discharge from the latter, after having continued for some time, was allowed to cease. About eight weeks after, he was seized with cough, which still continues, with other signs of phthisis; for a few days of the period which has elapsed since the commencement of the cough, there has also been hæmoptysis. The phthisis in this case evidently commenced with a scrofu-

lous disease of the hip-joint; for in two months after the discharge established for the cure of the *coxalgia* had ceased, the symptoms of phthisis began, and have since progressed in the irregular order. The scrofulous diathesis, therefore, before affecting the lungs, developed itself *externally*. Cases of this sort are by no means rare; the external scrofulous disease may be seated in other parts than the hip; sometimes, for example, it occurs in the form of *fistula in ano*. An important practical question occurs in relation to such cases: Ought we to endeavour to cure the external disease? If we do, there is great danger that the irritation may be transferred to the lungs, and lead to the development of tubercles: on the contrary, if we suffer the disease to proceed unmolested, the constitutional irritation arising from it may destroy the patient, or give rise indirectly to the formation of tubercles in the lungs, by producing a condition of the system favourable to this result. The proper course would seem to be, not to check the external disease too suddenly, but, if possible, to subdue it by degrees. Some time ago we had a case here, which illustrated the effects of an opposite plan of treatment. The patient was first attacked with tubercular meningitis; after recovering from that, he had *fistula in ano*; this was cured, phthisis consequently supervened, and the man died. These cases are extremely common, and you will see many such in your practice. The case now before us is also one in point. The arrest of these external discharges may likewise give rise to other diseases, among which are diseases of the heart, and inflammation of the lungs; the latter in such cases being often of a more chronic character than in ordinary pneumonia.

Case 2.—We have here an example of phthisis occurring in old age; the patient is sixty-two years old. He has been employed in one of the oyster cellars of this city,—a situation, from its dampness, and also its darkness, extremely favourable to the development of phthisis. He has had cough for seven years, but it has never been severe till the commencement of the past summer. There is now well marked cavernous respiration, with pectoriloquy, and other signs of cavity in the upper lobes of both lungs. Phthisis occurring at such an advanced age is extremely rare. But experience shows us that no age is exempt from this disease. Tubercles are found even in the fœtus, and at every period of life. They are most frequently met with, however, about the fifth year, and afterwards from the fifteenth to the twenty-fifth. Cases of phthisis, or other tuberculous diseases, occurring in old persons, are much more frequently observed in hospitals than in private practice.

I next introduce these men, formerly patients, but now employed in the house, in whom cavities in the lungs have been more or less perfectly healed. The first is a case of phthisis, in which a cavity became cicatrized after it had continued to a very advanced stage, but was reproduced upon a second attack of the disease. The patient entered the hospital about three years since,

with all the signs of a cavity in the right lung: dulness on percussion, cavernous respiration, &c., were very well marked. He remained in the wards for several months, during which time his condition was constantly improving: he was then discharged, and was, to all appearances, nearly well,—a small cavity, however, still remained, with slight cough and expectoration. After he had been out of the hospital about five months, he had an attack of intermittent fever, which continued for some weeks. After he recovered from the fever, he had a second attack of phthisis, or, as it were, a new crop of tubercles, for which he was under treatment in our wards. He is again much improved, though still feeble. The local signs indicate a partial consolidation of the lung by the process of cicatrization; thus, there is dulness on percussion, and a diminution of the natural vesicular respiration. These indications of a cicatrix exist where formerly were heard a strong cavernous respiration, and all the other signs of a cavity of considerable size. The cure in this case, then, is only partial.

But in the case which I now present to you, there has been a complete restoration. The patient, in the year 1835, had an attack of gangrene of the lungs, which continued for several months, with very foetid expectoration, and all the other symptoms of this affection. The local signs indicated a cavity large enough to contain the fist. After a time the expectoration became mucopurulent,—a change which indicated an arrest of the gangrene, and the formation of a false membrane on the surface of the cavity. The man, as you see, is now stout, free from dyspnoea, and in every respect perfectly healthy. There has existed no scrofulous vice in the constitution, tending to reproduce the cavity, as happened in the preceding case. The disease was caused by cold and intemperance. As the man has now been well for four years, the cure may be considered complete.

You see, therefore, that it is possible to cure a cavity in the lungs, however infrequent may be the occurrence of such a result, especially in phthisis, where new crops of tubercles are so liable to form. The treatment, in all such cases, is entirely negative; there is, in fact, *no remedy* for the lesion. All that we can do is to palliate the symptoms, and support the constitution of the patient till nature, if she be so disposed, accomplishes the cure. Generally, the prognosis after a cavity has been once formed, is altogether unfavourable; we always look for the death of the patient, whether the cavity be the result of a tubercular deposition, or of any other lesion. But before the cavity is formed, our chances of success are much greater. In hospitals, however, our prospects, in either case, are far less encouraging than in private practice. We are entirely unable to adopt those measures which are most essential to a successful issue; we can only employ palliative remedies; in relation to food, clothing, air, exercise, &c., the means at our command are necessarily very limited and imperfect. In private practice, on the contrary, we

are enabled more successfully to combat the general disease, by changing as far as possible the whole constitution of our patients; for this purpose, we direct a change of scenes and of climate by travelling, which is our principal reliance in such cases.

In the treatment of phthisis, you will find that there is great practical importance in the classification of the disease into several varieties, which I have called your attention to in preceding lectures. The inflammatory variety may frequently be arrested in the earlier stages by the ordinary antiphlogistic means which we employ in cases of simple inflammation. In that variety which commences slowly and gradually, on the contrary, we derive little or no aid from this plan of treatment. The treatment of phthisis, therefore, must be as various as the different forms of the disease. In the ordinary, slow cases, we must attempt to change, as it were, the whole being and nature of our patient, in the same manner as we do with regard to the mental constitution in the treatment of insanity. By thus producing a change in the constitution, we endeavour to cause the expulsion of the tubercular vice. I am not able to enter fully into this subject at present; nor, in the remarks which I shall hereafter make upon the treatment of phthisis, shall I attempt to give you more than the leading points,—to lay the foundation for a successful study of the subject. For the details, I must refer you to the different treatises which have been written on the disease.

At the last lecture, you will recollect, I introduced some cases of meningitis; the more severe of these cases I show you again to-day. When the patient was before you last week he was very ill, and had all the characteristic symptoms of meningitis; there was a distortion of the mouth, rigidity of the left arm, contraction of the pupil, delirium. These symptoms have since declined, and are now entirely gone. The contraction or distortion of the mouth is in such cases a valuable sign, and frequently gives us the key to the nature of the disease at the first sight of the patient: it is equally valuable, as you will see presently, in hemiplegia. The patient now suffers no pain, except in the region of the liver, and the adjacent portions of the abdomen,—the case being one of meningitis, co-existing with peritonitis. The tongue is of the natural appearance, and moist; skin moist and pleasant. The only symptom of the disease which still exists is an unnatural condition of the pulse: it is still rather slow and intermittent; it beats sixty-six in the minute; each pulsation is quick, but there is a long interval between them. The pulse, however, is by no means so slow as it is in the third stage of the disease, where there is coma. The treatment has consisted in a free bleeding from the arm at the commencement of the attack, followed by cups and blisters to the temples, cold applications, and the administration of one grain of calomel every hour. The mouth was slightly affected by the calomel, and the symptoms at once began to decline. General bleeding should be practised only in the early stages of the dis-

ease; afterwards cups and leeches should be employed, and repeated until the patient is weakened by the loss of blood, or the disease begins to abate. Cold applications to the head must be continued throughout the disease; bladders filled with powdered ice, or very cold water, may be employed, or vinegar and water, or evaporating lotions, such as diluted spirits. As regards mercurials in acute meningitis, I generally begin with a purgative dose of calomel, and afterwards give a grain every hour or two until slight ptyalism is produced. In chronic, or rather in mild cases, I give it in small doses. Blisters are particularly useful in this form of the affection; bleeding, of course, is not demanded to such an extent as in the acute form. Meningitis may generally be easily cured in its earlier stages; but after stupor has supervened, it becomes much more difficult, because an effusion of lymph has now taken place, and there is danger that the life may not be sustained until the effused matter is absorbed: hence the result is almost always fatal. In pleurisy, on the other hand, notwithstanding such effusions, a sufficient degree of motion to sustain respiration is retained, and the prospects of a favourable termination are, therefore, almost certain.

There is a variety of subacute meningitis, or simple congestion of the brain, (as it sometimes is,) occurring in persons accustomed to continued and intense mental application, as students, physicians, lawyers, and divines, in which improper treatment is sometimes productive of great mischief. In these cases, free bleeding is useless and injudicious; it weakens the patient, and renders him anemic, while it acts very slightly on the membranes of the brain. It is, therefore, only a palliative measure, which will prepare the patient for after treatment; the congestion still continues to occur, and on very slight causes. The treatment ought to be of a simple character, but continued for a considerable time to produce a permanent benefit. I generally direct the use of the warm bath two or three times a week; cold affusions to the head several times daily, to be continued for weeks, or months, if necessary; cups or leeches should be applied a few times at the beginning,—the former are generally preferable, and are vastly more within your reach. I also use gentle purgatives, as a means of producing revulsion; rhubarb will answer this purpose very well, either singly, or combined with aloes, or mercurials, or magnesia. Blisters are also very useful, especially when there is a tendency to epilepsy; they should be small, and repeatedly applied, either to the temples, or behind the mastoid process, according to the position of the pain: the latter is the best place for their application when the disease principally affects the base of the brain.

I next bring to your notice a case of inflammatory cardiac disease. The patient, a mulatto, aged twenty-two, enjoyed good health until about five months since. He can assign no cause for his present illness, which commenced about the month of July. He was seized, while in bed,

with hæmoptysis and palpitation of the heart; the former was at first considerable, but, after some time, ceased; the palpitations have continued. No pain was complained of until after his entrance into the hospital; it is now constant, but is most severe during the day; he lies on the back with the head raised, and is unable to remain without great distress, in any other position. Some time ago his abdomen began to swell; afterwards his face and legs; there is slight cough and mucous expectoration. In November he went to the Dispensary in Fifth street, where he was bled, cupped, and blistered over the præcordial region, and got some pills of calomel and digitalis. This treatment produced considerable improvement in the symptoms. Afterwards he applied to a quack in the city, who placed him upon some stimulating treatment, under which he grew worse. He entered the hospital December 4th. Since that time the symptoms have continued pretty uniform: they consist of the primary local signs, and the general or secondary symptoms, produced by the obstruction of the circulation, which is the consequence of the disordered action of the heart. Attending first to the local signs, you will remark, even at a little distance from the patient, a considerable fulness or prominence in the præcordial region, extending over a much larger space than that naturally occupied by the heart. There is flatness on percussion throughout this region, the lungs being entirely pushed aside by the heart. There is a bellows or rasping sound in the first sound of the heart; the second is inaudible. The action of the heart was at first violent; it is now indistinct, and concealed by fluid in the pericardium: still we can perceive that it is irregular. The preceding signs indicate effusion into the pericardium, and thickening of the heart, with dilatation, arising from inflammation of this organ and its membranes. The bellows and rasping sounds are produced—1, by the spasmodic action of the heart; 2, by an obstruction to the passage of the blood, which is produced by thickening of the valves. As the valves are generally irregularly thickened, the current of blood is broken, and gives rise to a rough sound very like that produced by the passage of water through an irregular or broken pipe. The quick spasmodic contractions of the heart cause a considerable variety in the rapidity of passage and force of the blood, and therefore the sound changes frequently,—passing, at times, from the bellows sound to the rougher tone to which you give the name of rasping sound, and again subsiding to a common bellows murmur when the temporary increase in the rapidity of the heart's action has ceased.

The rough sound occurs during the systole of the heart, because it is directly dependent upon the ventricular contraction; but it may be produced either at the mitral or at the semilunar valves: when it occurs at the semilunar valve, you will almost always find that the second sound is lost or greatly impaired, because its production depends upon the integrity of this valve. When it is caused by regurgitation

through the mitral valve, from deficiency in its surface, and consequent inaptness to close completely the orifice during the contraction of the heart, you may still distinguish the valvular arterial sounds. In this patient the second sound is so deficient that I infer that the semilunar valve is thickened and stiffened, as well as the mitral more or less altered.

The patient, you see, is young and stout, as are many patients affected with hypertrophy and dilatation following acute inflammation of the heart. These affections frequently arise from rheumatism, as is often the case with the inflammations of serous membranes generally; but, in the present instance, no such origin can be traced. Strange as it may seem, few patients die of the acute symptoms of cardiac diseases; it is the chronic forms of these affections that prove so distressing and fatal. Hence it is our duty always to arrest them, if possible, in the acute stage; when the disease has become chronic, we may be certain that an organic lesion of the heart has taken place, which is altogether incurable. In the treatment of this case, therefore, which was decidedly inflammatory, we have adopted the most active antiphlogistic measures from the commencement. The patient was first bled to the amount of 16 oz., and the bleeding has been several times repeated; cups have been twice applied, followed by blisters to the præcordial region; warm pediluvia have been employed, and the lowest diet only allowed. The following prescription was likewise continued until the mouth was slightly affected:

R. Pulv. Digitalis gr. j.
Hydrarg. Submuriat., et
Pulv. Opii \overline{aa} gr. $\frac{1}{2}$. M.

S. To be taken three times a day.

The patient's condition is now, in every respect, much improved; but, as there is certainly an organic change in the structure of the heart, we cannot hope for his entire recovery.

The last case which I bring before you is one of paralysis, probably caused by the pressure of a tumour on the right side of the brain, near the orbit. The patient is an old woman, who was admitted into the hospital a few days since; but no satisfactory history of her affection can be obtained from her. I can, therefore, only direct your attention to her actual state. The first symptom which I noticed when I first saw the patient was a slight distortion of the mouth, which at once led me to suspect the nature of the case. The mouth, you will perceive, is slightly drawn to the right side; the complete use of the right arm is retained, while the left is kept crossed on the chest, and is raised with much difficulty; the left leg also partakes of this rigidity and loss of power; the tongue is protruded imperfectly, and is now inclined a little to the left side,—two days since, it was to the other side. The direction of the tongue in cases of paralysis depends upon the particular muscle which may happen at the moment to be acting upon it; thus, when the digastricus of the healthy side acts, it will make the point of the tongue incline to the diseased side.

When the patient speaks, you detect at the end of each word a peculiar thick, husky tone, which is so striking, that it may be properly called the *paralytic tone*. In addition to these symptoms, you perceive, at the slightest glance, that the right eye is very prominent, while the left retains its natural level: it is from this projection of the eye, especially, that I suspect the existence of a tumour pressing on the right hemisphere of the brain, and causing paralysis of the left side of the body; for paralysis and stiffness may both arise from simple softening of the brain. Indeed, in cases of tumours, the rigidity arises rather from the softening and inflammation around the tumour, than from the mere pressure of the mass.

In the few minutes which are left us, I will show you the lungs and heart of a subject who recently died in the wards of phthisis pulmonalis, complicated with pleurisy and inflammation of the membranes of the heart. You saw the patient last week, at which time I detailed to you the symptoms of the case, and the particular lesions which they indicated. Among other things, I called your attention to the pulse, which, notwithstanding the evident existence of pleurisy, was by no means of the strong, hard, full character, which it usually offers in this inflammation; it partook, in a great measure, of the nature of the irritable pulse of tubercular disease. It is by this character of the pulse that we are often enabled to determine at once whether pleurisy exists by itself, as a simple inflammation, or is attended with the deposition of tubercles, either in the lungs or the serous membranes. Pleurisy, however, may result in tuberculous disease, without being attended by the peculiar pulse of which I have spoken; but, in this case, the tubercles are not developed until after the pleurisy has disappeared.

The quick, irritated, and frequent pulse, together with the great heat of skin and profuse sweats, are the best, indeed almost the only means of distinguishing between simple pleurisy and that which is connected with a deposit of tuberculous matter. By attending to this circumstance you will rarely be mistaken; and I lately had the pleasure of assuring a personal friend whom I was called to visit at Washington, that a severe attack of pleurisy under which he laboured, was not connected with tubercles. If phthisis should follow such cases, it is usually a consequence of the pleurisy, perhaps, as some suppose, of the absorption of the purulent liquid; hence, even in the non-tuberculous variety of pleurisy, you should watch the termination of the disease.

The *left lung* is adherent throughout a considerable extent of its surface; some of these adhesions are evidently old, while others are very recent. The pulmonary pleura is very thick, opaque, and almost as dense as cartilage; it possesses this character over the whole lung, except that surface which faces the diaphragm. On cutting into the lung, several tubercles are seen immediately below the pleura; and near the summit there is a mass of tubercle occupying the whole

of one of the lobules. Around this mass are seen numerous gray granulations, (the commencing stage of tubercle;) the lung is likewise congested, and infiltrated with bloody serum. *Right lung.*—About the middle of the upper lobe granulations are seen, but by no means so numerous as in the other lung. The rest of the lung is infiltrated with blood, and is of a dark shining colour at the summit, almost of the consistence of cartilage,—more so, indeed, than it is in pneumonia. This, likewise, is the commencing stage of a tubercular infiltration; but the infiltration occupies a different portion of the texture of the lung from that in which the granulations are found: the latter are seated in the vesicles,—the former pervades the cellular substance around them. This infiltration is the commencing stage of tubercle; and although not sufficiently advanced to be recognised by the physical signs, the peculiar characters of the pleurisy pointed out its true nature during life.

Heart.—The pericardium, before it was opened, contained two pints of slightly turbid serum; the membrane was highly injected, and of a bright red colour, which is now much less manifest; its transparency is much impaired, and its surface is roughened by the deposition of small masses of lymph. It was the presence of these little points of lymph which produced the creaking sound of the heart, of which I spoke at the last lecture. This ceased in a few days when the effusion increased. The lymph acts in the same way as a grain of sand in a piece of accurately adjusted machinery; it requires only a very small obstacle to the motion to produce a considerable grating or creaking whenever there is much friction. So these little fibrinous points, by opposing the partial revolution of the heart on its axis, gave rise to the creaking which was heard principally during the diastole, and at the commencement of the systole. You must have remarked that there is an immense disproportion between the amount of serum and of lymph which was effused in the course of the pericarditis. This is accounted for by the anemic condition of the patient's system; if his blood had contained more solid matter, we would doubtless have found more lymph on the surface of the pericardium, and less serum in its cavity.

A rasping or bellows sound of the heart was likewise heard during the man's illness. To account for this, we must examine the internal membrane of the heart. On opening the left ventricle, I find a yellowish coagulum of considerable firmness, such as is often found in endocarditis. The membrane lining the ventricle is opaque and slightly thickened. On opening the left auricle I see an immense vegetation, or cauliflower-like excrescence, occupying one portion of the mitral valve, with a partial destruction of the substance of the valve: this excrescence is much larger than any that I have ever before witnessed. It is about one-fourth of an inch thick; its edges very irregular and everted, forming the borders of an ulcer through which a finger can readily be passed from the ventricle to the auricle.

The edges are everted towards the auricle, so that the total breadth of the excrescence is not less than an inch, and, of course, is nearly twice the breadth of the opening. The substance composing the edges of the ulcer is evidently the muscular substance of the heart, which is situated just beyond the fibrous portion of the valve; in fact, a portion of one of the columnæ carneæ projects inwardly towards the middle of the ulceration, and is divided directly across. The opposite lip of the valve is somewhat thickened and opaque, but free from vegetations. The internal membrane of the auricle is also much thickened, and of a dull, opaque, white colour.

The semilunar valves of the aorta are thickened at their base to a sufficient degree to afford some obstacle to the passage of the blood. The thickness of the left ventricle is half an inch at the middle; its cavity is about one-third, or a little more, greater than natural.

The cavity of the right ventricle presents an opaque whiteness of its lining membrane, which is extremely thickened in the half which is nearest to the tricuspid valve. The valve itself is thickened and opaque, but still flexible.

The impediment to the passage of the blood through the semilunar valve of the aorta may undoubtedly have caused some slight roughening of the first sound of the heart, but the chief cause of the morbid systolic sound was certainly the regurgitation from the left ventricle to the auricle. The size of the ulcerated opening was such that a very considerable current of blood passed in this manner, and was an evident cause of the morbid sound, which necessarily took place during the contraction of the ventricle, and the passage of the blood into the auricle through the morbid opening. During life this might have been distinguished with great precision, for the second sound of the heart was preserved until the last, and was very slightly altered. This was explained by the very slight alteration of the semilunar valves. The seat of the rasping sound corresponded to the middle of the heart, that is, to the part near the mitral valve, and from thence gradually diminished in ascending towards the aorta, or descending towards the apex of the heart. The character of the morbid sound varied from a rasping to a rough bellows sound, according to the degree of activity of the circulation, and the force of the ventricular contraction.

In a case like this, which is almost necessarily fatal, the precise situation of the most important lesion, would have been but of little practical utility; this, however, is far from being always the case. When we desire the greatest attainable accuracy in the diagnosis of valvular disease, we cannot do better than adopt the method suggested by my colleague, Dr. Pennock, who is extremely familiar with the pathology of cardiac disease. It consists in using a stethoscope composed of a flexible tube, about two feet long, with a hollow cone of an inch in diameter at the end, and the usual ear piece at the other, both formed of block tin; that is, the ordinary ear-trumpet, a little modified. The flexible tube neutralizes the im-

pulsation of the heart, and the sound is heard without the transmission of the shock which takes place through the solid stethoscope. The diagnosis of endocarditis in the present case was free from difficulty, and, you may remember, was made a fortnight ago. The particular symptoms I shall describe more at length in a subsequent lecture.

FOREIGN SUMMARY.

VELPEAU'S CLINICAL LECTURES ON OPHTHALMIA. No. XIII.

Terminations of iritis.—Prognosis.—Treatment of acute iritis.—General treatment.

Terminations of iritis.—Iritis may terminate in several ways; by resolution; by the formation of false membranes, or adhesion of the iris to the surrounding tissues; by transformation into some other disease; or by suppuration.

Resolution is the most frequent and at the same time the most desirable termination of iritis. When it takes place the inflammatory symptoms gradually become less acute. The redness of the conjunctiva, as also that of the radiated sclerotic zone, diminishes, and at last entirely disappears. The iris appears less tumefied, and again assumes the smooth appearance which it presents in the healthy state. The external and internal zones return in a great measure to their natural colour, the pupil recovers its mobility and its regularity of form, and the cornea, as also the aqueous humour, again becomes transparent. The clarification of the aqueous humour is, indeed, one of the first symptoms which announce the resolution of the inflammation, and when it takes place we are justified in making a favourable prognosis. The false membranes, the flakes of coagulable lymph, are gradually absorbed, and the collections of blood or lymph which occur in the tissue of the iris itself, and of which I have already spoken, become flattened, circumscribed, and are finally resolved.

The resolution is not, however, always as complete after acute inflammation of the iris, as I now describe it to be. The abscesses may leave indelible marks, the coagulable lymph which is effused in the pupil may not be wholly absorbed, and the iris may not entirely recover its mobility. Indeed, when adhesions have been formed, the resolution is seldom perfect.

There are two forms of adhesion of the iris. Adhesion may exist between the iris and the adjoining tissues, thus giving rise to the synechia of pathologists, or it may exist between the fibres of the iris itself. The iris is formed by a great number of circular and radiated fibres, which are supposed by some physiologists to be muscular, but in my opinion their views are erroneous. Whatever may be their nature, these fibres, which act separately and are naturally very moveable, may become united with one another in such

a manner as to lose partly or even entirely their usual mobility. I cannot give you a better idea of the nature of the union that takes place than by comparing it to that which would occur between the fingers of the hand, were they kept in close approximation when violently inflamed. You may not all feel inclined to recognize the existence of this species of adhesion. But on consideration you will find that it is only by allowing that adhesion does take place between the fibres of the iris, that we can satisfactorily explain the coarctations of the pupil, coarctations which we often observe even when the iris has contracted no adhesion whatever with the adjoining tissues. We have at the present time in our male wards a case which will illustrate this form of adhesion, the coarctation of the pupil being carried to a great extent, without there being any apparent connexion between the iris and the organs placed posteriorly. The patient, a man of about fifty years of age, was affected with acute iritis of the left eye, several years ago, and the pupil was so contracted when he entered the hospital, this day fortnight, that it would scarcely have admitted the head of a large pin. Under the influence of belladonna, the pupil has become slightly enlarged, and has assumed a triangular form, something similar to an ace of clubs. The other eye is at the present time the seat of chronic inflammation, and it is for the affection of this eye that he entered the hospital. The pupil is irregular, and presents a margin prominent in some parts, slightly depressed in others. Those portions of the pupil which are depressed seem as if they were drawn back by something, whilst those which are prominent are apparently quite free. This case alone will enable you to form a very correct idea of the various modifications which adhesion of the iris may present.

The adhesion which takes place between the iris and the adjoining tissues also offers two forms, which I have already briefly described to you under the names of anterior and posterior synechia. In anterior synechia the iris may adhere to the cornea either by its entire papillary circumference, or by a few points only. This kind of adhesion is rare, and when it exists, the size of the anterior chamber appears much diminished. Posterior synechia is much more frequently met with, nor can we be surprised that this should be the case, when we consider that the distance which separates the iris from the crystalline lens is extremely slight. When the iris is inflamed it becomes tumefied, and the aqueous humour in the anterior chamber at the same time increasing, it is pushed backwards towards the lens. If the inflammation does not subside, effusion of lymph takes place, as we have already seen; the aqueous humour becomes troubled, and small filaments soon form, which, attaching themselves to the posterior surface of the iris, and to the anterior surface of the crystalline lens, constitute a connexion between the two organs. This form of adhesion may be easily recognized by rapidly raising the eyelid, previously closed for a few seconds, and then examining the eye. The pupil

dilates when the eyelid is closed, but unequally, so as to assume every possible variety of shape. In some instances the adhesion takes place in another manner; the pupillary margin is connected with the crystalline lens by small filaments like hairs, a quarter of a line or half a line in length, which, tying it down as it were, occasion small triangular depressions wherever they exist. In all the forms of adhesion which I have described the functions of vision are more or less impaired.

Sometimes, when the iris has partly recovered its mobility, we see at the bottom of the pupil, near its circumference, a radiated ring. This ring is of a blackish colour, and may be compared to the sclerotic zone, of which I have so often spoken. When it is present the sight is always more or less disordered. Its existence is a proof that the inflammation has occupied the parenchyma of the iris, that pigmentum has been secreted in great abundance, and that the pupil, having rested on the anterior surface of the crystalline lens, has left this trace of its passage. Great attention has been paid to this phenomenon by German pathologists, who, to explain it, have invented a black radiated cataract. Indeed, the discussion on this subject has been rather warm, some asserting that the zone was formed by vessels, others that it was formed by pigmentum. The black radiated ring in question may be easily produced in the dead subject by depressing the cornea—a fact which shows at once that the explanation I have given you is the true one.

After acute inflammation of the iris the resolution is sometimes so imperfect as to allow the formation of false cataract or of opaque membranes, which may constitute a complete obstacle to vision. I have often seen the malady thus terminate.

Iritis may disappear under the influence of the inflammation of the eye. Thus I have several times seen it give way when the cornea or the conjunctiva have become seriously affected.

Sometimes iritis terminates by suppuration, a circumstance much to be dreaded, from the disastrous consequences by which it is followed, with regard to the functions of the organ. When the iritis is extremely intense the whole interior of the eye may be attacked by phlegmonous or purulent inflammation; this general inflammation of the eye is called *ophthalmitis* by modern authors.

Prognosis.—From the description I have given of iritis, it is evidently a serious disease, not as regards the life of the patient, which is seldom in danger, but as regards the functions of the affected organ, which are often impaired even when the disease is cured. When, however, the treatment is begun sufficiently early, iritis frequently gives way, especially if there is no previous opacity of the cornea, and if the inflammation has not been cured by local injury.

Treatment of Acute Iritis.

Before we enter at length into the examination of the various remedial agents which are directed against iritis, I must remind you that a distinction

should be made between primitive and secondary iritis; that is, between the inflammatory affection which commences by the iris, and that which is merely a consequence of the inflammation of some other organ. This distinction is important, as secondary iritis will often disappear when the affection by which it is caused has given way, and is often much less difficult to cure than primitive iritis. Local remedies also sometimes prove successful in secondary iritis, whereas they have little or no influence over the primitive form of inflammation.

The remedies which have been employed in the treatment of iritis are quite as numerous as those which have been used against keratitis, nearly every possible plan of treatment, both general and local, having been alternately tried, extolled, and rejected. I have myself tried most of the remedial agents which have been directed against iritis at various epochs, and will now lay before you the result of my experience. In doing so, I shall follow the same plan as when treating of keratitis; that is, I shall first speak of the general, and then of the local treatment of the disease. As I have said nothing hitherto of the pretended specific forms of iritis, I shall not now allude to the treatment which they may require.

General treatment.—General remedies, as might be expected, from the situation of the iris, occupy the first place in the treatment of iritis. They may be divided into three classes—evacuants, alteratives, and resolutes.

At the head of the first class may be placed *blood-letting*, both general and local. Blood-letting is certainly the most powerful agent that can be directed against the disease, and, at the same time, the one the utility of which is the most universally recognised. But, although practitioners are unanimous in acknowledging the efficacy of the remedy, they are far from agreeing as to the manner in which it should be employed. Some prefer general, some local bleeding; some bleed copiously at several days interval, others bleed less freely, but repeat the operation oftener; whilst others, again, extol the plan of bleeding *coup sur coup*. Before we examine the comparative efficacy of these various methods, I must remind you that general bleeding may sometimes be contra-indicated by the individual state of the patient. Thus, it cannot be resorted to, or at least carried to any great extent, with patients of a lymphatic or scrofulous habit of body, with those whose constitution has been weakened or deteriorated by disease, or by any other cause, or with those who appear to be in a state of anemia. When these contra-indications do not exist, general bleeding may be resorted to without fear. I do not, however, in any case, approve of the abstraction of a very large quantity of blood at the commencement of the disease, a plan recommended by some surgeons. Thus, Saunders advises the patient to be bled as soon as possible to the extent of two, three, and even four pounds. Such a mode of treatment is scarcely ever adopted in France. The loss of so large a quantity of blood may sometimes be useful, it is true, but it is, ge-

nerally speaking, attended with very serious disadvantage. The patient is very frequently reduced to such a state of anemia and weakness, that effusion may take place in the serous cavities, or, what is more serious, the inflammation gradually returns as the strength improves, and that when his extreme weakness precludes our having recourse to the remedy we have already employed.

When the patient is strong and robust, I often bleed *coup sur coup*, that is, night and morning for several consecutive days, and, at the same time, apply leeches behind the ears in the middle of the day; but I do not make it a general rule to act in this manner. Sometimes I bleed with the lancet one day, and only apply leeches the following morning; indeed, I am guided by circumstances, and the individual state of the person I am treating. The inflammation is always favourably modified by this plan of treatment, sometimes, even, it is entirely subdued; the vascularization of the sclerotica, as also that of the conjunctiva, disappearing, and the cornea recovering its usual transparency. In some cases, however, bleeding alone will not completely subdue the disease.

Some practitioners advise blood to be taken from the foot, sooner than from the arm, because they think that blood-letting thus practised, exercises a derivative action. As, however, I cannot understand why the effect of venesection performed on the veins of the foot, should be more derivative than when performed on those of the arm, I shall not say anything further on the subject.

Local blood-letting is often associated with general blood-letting, but it is also frequently resorted to alone, when the latter mode of depletion is inapplicable, owing to the state of anemia in which we find the patient. In these cases the local abstraction of blood will produce the same effect on the inflamed membrane, and that without much loss to the economy. When leeches are employed, they may be applied either on the mastoid region, on the temples, or round the orbits. My own experience has not shown me that they are more useful in one region than in another; nor do I think that the question can easily be solved, as the efficacy of leeches is not, in the majority of cases, sufficiently evident to enable us to form a correct estimate of the benefit that has been derived from their use. In my opinion, therefore, it is of but little importance which of the regions I have named is selected, unless it be in private practice, when it is as well not to place them round the orbit, as the swelling of the eyelids to which they give rise often alarms the patient and his family. The tumefaction being merely due to serous or sanguineous infiltration, and nearly always disappearing in the course of two or three days, there is no real foundation for the fears which are entertained. I am, indeed, inclined to believe that, acting as a revulsive, it may favour the resolution of the malady. It is, nevertheless, better for the surgeon not to have recourse to a plan of

treatment which may create a disagreeable impression on the mind of his patient. Leeches may also be placed, as in keratitis, on the internal surface of the eyelids, where two or three will often exercise as great an influence over the disease as fifteen or twenty applied on another region. But this is a practice which I only follow when I wish to act on the inflammatory affection of the iris, with the loss to the system of as little blood as possible.

Cupping, which is preferred by some practitioners to every other kind of local depletion, may be resorted to under the same circumstances as leeches, the indication for the one being also the indication for the other. Many surgeons think that advantage is to be derived from cupping in one region sooner than in another, but I have not, in my own practice, found this to be the case.

When the inflammation persists, after general and local blood-letting have been employed, other remedies must be tried, the most important of which are purgatives.

Purgatives have always been much employed in the treatment of acute iritis. You know I look upon them as irritants, which act by depriving the economy of a certain proportion of its elements. Weller extols the purgatives that are in general use, such as senna, jalap, gamboge, &c. but without appearing to entertain any peculiar theoretical ideas respecting their mode of action. Other surgeons, attributing to this class of therapeutic agents specific properties, employ the drastic purgatives, such as aloes, scammony, &c. in frequently repeated doses, with a view to irritate the intestinal canal. English practitioners, guided by the theoretical ideas which they profess, make frequent use of purgatives. In France, a short time ago, purgatives were generally accounted irritants capable of inflaming the intestinal canal, unless administered with the greatest precaution. With our friends on the other side of the channel, no such fears existing, they are constantly resorted to: calomel, either alone or associated with some other substance, is the purgative they most frequently employ. Nor can we be surprised at this, when we recollect that calomel is considered by them, not only to be an excellent antiphlogistic, but also to possess properties peculiar to itself, and is, consequently, generally introduced into their prescriptions when they consider purgatives indicated.

Calomel is employed in England as a purgative, with a view to produce mercurial action, and as an alterative. When given as a purgative, the dose is from two to six grains, repeated for several consecutive days. When given in order to produce salivation, ten, fifteen, or twenty grains are administered every day in divided doses; and lastly, when it is thought desirable to produce an alterative effect, it is employed in small doses, combined with opium or hyoscyamus, two or three times a day. Calomel has been used in the same manner in France; indeed, some of our countrymen have even gone further than the English surgeons. A medical gentle-

man of Avignon, for instance, having made a journey to England, became convinced that calomel was a heroic remedy against acute iritis, and determined, on his return, to give it a trial. This he did in the hospital of Avignon, where he gave, with great success, it appears, as much as twenty and thirty grains of calomel daily to his patients. I have myself given every species of purgative, and that in every possible manner, and have come to the following conclusions:—Ordinary purgatives, whether they act as evacuates or as irritants, have never appeared to me to possess much efficacy in the treatment of iritis. I have never seen the inflammation disappear in such a manner as to leave me the conviction that it was to the purgatives I had administered that its disappearance was due. I have very frequently given calomel, both as a purgative, as a mercurial agent, and as an alterative, and I must say that I have sometimes seen the iritis disappear when the economy was deeply disturbed by its action. Thus I have seen the decrease and final disappearance of the inflammation coincide with salivation, but I am not prepared to say whether this was the result of the medication I was employing, or whether it was mere coincidence. We had, a few days since, in our female ward, a woman labouring under iritis, accompanied by chronic keratitis. Blood-letting and topical remedies having proved unavailing, I gave her ten or twelve grains of calomel every day, for five successive days. The calomel caused violent purging, as also salivation, and the intensity of the iritis was, at the same time, much mitigated. This at first appears conclusive as regards the efficacy of calomel; but if we scrutinize narrowly the facts of the case, we shall find that we are not in reality authorized to draw from it such an inference. While she was taking the calomel, a blister was placed on the calf of each leg, and the application of one of these blisters was followed by severe phlegmonous erysipelas. We cannot, therefore, but ask whether the amelioration which took place is to be attributed to the salivation, or to the revulsive action set upon the leg. But this is a question which I do not feel able to answer, as I have seen in many other instances salivation productive of no benefit whatever. In fine, I believe that calomel, given in large doses, may prove useful in the treatment of acute iritis; but, on the other hand, I doubt whether the accidents to which the presence of this substance in the economy often gives rise, are not of such a nature as to more than counterbalance the benefit which may be derived from it. It is well known that salivation is sometimes followed by a form of diarrhoea which is extremely difficult to cure, as it depends on a serious lesion of the intestinal canal. In several cases of this kind which I have been able to examine after death, I have found the mucous membrane of that organ tumefied, of a grayish colour, and disorganized to a surprising extent. Knowing, therefore, that the use of calomel exposes his patient to such an affection, a surgeon must have extreme confidence in its efficacy as a

remedy against the disease to employ it in every case—a confidence indeed which I am very far from possessing. I often give, however, four, eight, or ten grains, for the first day or two of the treatment.

Tincture of colchicum and oil of turpentine have been lauded by some practitioners as extremely efficacious remedies. Tincture of colchicum has been more especially recommended by M. Carron du Villard, and that principally against the specific forms of ophthalmia. I have often employed this preparation, but do not remember ever having seen the patients on whom I tried it derive much benefit from its use. The action of tincture of colchicum is in my opinion similar to that of other purgatives, and as it is a purgative on which no reliance can be placed, I do not think it will ever be much used in the treatment of iritis. Some English surgeons seem to look upon oil of turpentine as a remedy endowed with extraordinary properties. Thus Mr. Carmichael says he has used it with surprising success in iritis. He gives two, four, six, or even eight drachms, in the twenty-four hours. Messrs. Guthrie, Riggs, Mackenzie, and others, have also published cases which would tend to prove that oil of turpentine is a valuable therapeutic agent in the treatment of iritis. My own experience of the remedy is too slight to enable me to say much on the subject, but on examining the statements to which I have just alluded, I do not find that they are at all conclusive. The patients whose cases are related had all been affected three weeks, a month, or even two months, previous to being treated, and were then either cured in ten or fifteen days, or otherwise the eye became disorganized. But this is what we see continually when recourse is had to those remedies only which are usually employed. The oil of turpentine is, like the oil of colocynth, an acrid irritating purgative, and its use is not unattended with danger to the intestinal canal. In none of the cases which have hitherto been published do I see any thing which can warrant our preferring it either to calomel or to the other purgatives which are generally used. It is, moreover, a most detestable remedy to take, and why should we choose it, when there are so many of the same nature more agreeable to the patient, and to those who surround him, and also more efficacious?

In addition to blood-letting and purgatives, there are many other general remedies which have been lauded as specifics against iritis. Such are antimonials, the golden sulphuret of antimony, the sulphur, iodine, sudorifics, &c.

I have frequently given tartarised antimony, either diluted or in sorian doses, but have never seen it exercise much influence over the course of the disease. Sometimes, however, when the iritis was already in a great measure subdued, it has appeared to accelerate the resolution of the inflammation. With regard to the golden sulphuret of antimony, it may be classed along with the nitrate of bismuth, which, although extolled for some time as an extremely efficacious remedy,

is now looked upon as an inert powder. The same cannot altogether be said of sulphur and iodine. Yet I have given sulphur in doses varying from fifteen to twenty grains, without obtaining any satisfactory results. The utility of iodine is also very questionable, unless it be given, as indeed it generally is, with a view to act on a scrofulous constitution: by improving the general health it certainly will act indirectly on the eyes. The sulphate of quinine is also only useful when the patient is weak and feeble, and can merely benefit the eyes by benefitting the constitution in general.

From the cursory survey we have taken of the various remedial agents which are employed in the general treatment of acute iritis, you will perceive that, with the exception of blood-letting, we have but very little to boast of; that there is indeed no other general remedy on which any dependence can be placed. Such a conclusion is not very flattering to our vanity, but I do not hesitate to make it known to you, as it is the result of my lengthened experience of the disease. It is, in my opinion, much preferable that we should be aware of our ignorance, on a subject with which we really are not acquainted, than that we should delude ourselves with the idea that we are perfectly conversant with it, as in the first case we continue our researches, whereas in the second we remain inactive.

There are a certain number of remedies, such as blisters, setons, moxas, &c., which partially deserve the name of general agents, and which ought, therefore, to be studied before we begin to examine the local treatment of the disease. Applied at the nape of the neck, and in the immediate vicinity of the head, blisters do not appear to exercise much influence over the progress of acute iritis, and as they may act on the lymphatic system, I think it is better not to employ them in those regions. In other parts of the body they may be beneficial; I occasionally apply them on the thighs, or on the calf of the legs, keeping them open for some time. I have in several instances surrounded the neck or the two arms of a patient with a large blister, but have never found the iritis to be sensibly modified by such a measure. In some cases of acute iritis I have applied blisters over the orbit, and this practice has been attended with so much benefit to the patients with whom I adopted it, that I feel inclined to give it a further trial. I have, as you all know, often followed this plan of treatment in the various inflammatory affections of the eye, and have never found reason to repent having so done.

Some authors have spoken of a remedy similar in its mode of action to cantharides plaster, as if the effects it produces were quite miraculous. A piece of linen is steeped in an effusion of meze-reon root in strong acetic acid, and then applied to the skin, on which it produces vesication, exactly in the same manner as boiling water, or an ordinary blister. I cannot, however, understand why the effects of these agents being identical, one should be so much more efficacious than the other.

Setons and moxas are also used in the treat-

ment of iritis. They may be useful, but more so in the chronic than in the acute stage of the disease.—*Lond. Med. Gaz.*

Statistics of Tracheotomy.—Since the introduction of tracheotomy in croupal affections into France, there has, doubtless, been reason to deplore a great number of failures; it may be presumed, however, that one of the chief reasons of its insufficiency depends on the delay, and the obstacles that are generally thrown in the way of its performance. The following are the results which the different most celebrated operators have, by their own declarations, in a late discussion at the Royal Academy of Medicine in Paris, obtained.

	Operations.	Cures.	Deaths.
M. Amussat	6	0	6
Baudelocque	15	0	15
Blandin	5	0	5
Brettonneau	18	4	14
Gerdy	6	4	2
Roux	4	0	4
Trosseau	80	20	60
Velpeau	6	0	6
	150	28	112

So that, of 140 patients operated on 28 only have been cured, and 112 have died.—*Journal des Connais. Med. from Brit. and For. Med. Rev.*

Ergot of Rye—its effects on the Fœtus.

Mr. Proctor, in reference to the effect of ergot of rye on fœtal life, said that a friend of his, in extensive midwifery practice in the country, had, from considerable observation, come to the conclusion that it did effect the life of the fœtus. He, Mr. Proctor, thought this conclusion to be well founded. When labour was terminated by this agent, the action was unnatural, the pain was continuous instead of intermittent, and consequently violent. He had been alarmed in several cases, at the effect of the ergot of rye on the mother. He had seen it in one instance produce delirium and vertigo, and in another umbilical hernia. His friend in the country, to whom he had alluded, instead of taking ergot of rye in his pocket when he went to a labour, had now substituted tea and sugar, and this was acting upon the safe side.

Dr. Bennett inquired in what way it was supposed the ergot acted injuriously to the infant; was it by producing apoplexy in the mother, or by acting directly on fœtal life?

Mr. Statham had administered the ergot of rye in many cases, and he had come to the conclusion that it was injurious to fœtal life. He had at first thought its use admissible in all cases in which the os uteri was dilated to any extent. He now never gave it except when the child's head was in the pelvis, and then he had no doubt of its being advantageous, if the os uteri were flaccid. He considered that the ergot acted injuriously, by producing pressure upon the umbilical chord, and stopping the circulation.—*Proceedings of London Medical Society.—Lancet.*

